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THE AMERICAN.

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PHILADELPHIA, SATURDAY, SEPTEMBER 5, 1885.

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REVIEW OF THE WEEK.

RUMORS of plans for the reduction of the tariff are still in the air, and sundry self-elected advisers of the Administration are busy at showing how it can be done so as to make it as much of a Free Trade victory as possible. But there is one very serious obstacle in the way, which will reinforce Protectionist resistance. The revenues indicate a falling off of about \$16,000,000, while the expenses of the Government have increased by some \$30,000,000. This is enough to make our reductionists think as well as stop. If the country had taken their advice some two years ago, when they were talking of "a surplus of \$100,000,000 a year," and demanding its abolition, where would the national finances be now? The truth is the national revenues depend on sources of revenue so uncertain, that we must maintain a large margin, and when that results in a surplus get rid of it by distribution among the states, unless some better plan for its outlay than that of 1836 can be devised.

MR. PORTER writes to the *Press* that the programme of the Administration is to reduce the revenue thirty, or possibly forty millions, and to effect this reduction by lowering rates of duty on increasing the free list. We must presume "the Administration,"—whatever that may mean,—to be very well aware that a decrease of the rate on many classes of importations would have the effect of increasing the revenue,—a greater volume coming in under a tariff more favorable to foreign goods. But it would reduce revenue, of course, to place upon the free list articles that now pay duty. If "the Administration" were wise enough, and sufficiently free from the control of the Free Trade faction, it would adopt a simple programme to increase the rates on woolen goods, (and correspondingly on wool), and on other manufactures so that the revenue from them would be lessened, and then to make a large part of the sugar list,—certainly raw sugar and molasses,—free. These changes would be a real benefit to the country, aside from the questions of revenue, and that is the proper ground upon which to put the whole subject. The tariff is not for the revenue, it is for the establishment and maintenance of American independence, and for a bulwark of our social conditions against those of foreign countries. But of course Mr. Cleveland's admirers, even the best of them, will tell him otherwise.

THE statement of the Treasury for the month of August shows that there has been a net increase of cash in the vaults amounting to \$3,646,610. Comparing the figures on the "less cash in the Treasury" plan, the apparent reduction of the national debt during the month was \$2,879,052. As a matter of fact, however, no bonds having been called, the funded debt remains without material change. The 3 per cent. bonds outstanding, the only ones redeemable before 1891, amount to \$194,190,500.

"THE narrow scope of the Civil Service Reform law does not cover this case," writes a bolting Republican editor of the Indianapolis Post-Office affair. Mr. Aquila Jones frankly avows that he removed certain men merely because they were Republicans, and appointed others who were Democrats. And he says the law allowed him to do so, as in fact it did. The scope of what is called Civil Service Reform is very narrow. "The bed is short for a man to stretch himself, and the covering for a man to wrap himself therein." The Reform covers only a percentage of the offices filled by appointment. It gives no security against removal for political reasons in the case of any office it does not cover. And its friends have no intelligible plan for enlarging its scope. They

have not the courage to propose that we go back to the Washingtonian basis, when there was no removal from civil office except for cause.

AT the close of last week Mr. Lamar was the only member of the Cabinet in Washington, and the President was in the wilds of the Adirondacks. But we do not see in our Democratic exchanges that reprobation of the members of the Administration for the neglect of public duty, to which they used to treat Mr. Arthur and his Cabinet. The fact that the President and his advisers are Democrats has opened their eyes to the discovery that our government is not an old rattle-trap, which must go to pieces if not watched every hour of the day and every week of the year. This will be an excellent thing for them to remember four years hence.

THE awful question whether Mr. Tilden is wroth with Mr. Cleveland agitates the Democratic mind. The evidence of an indirect kind seems to prove there has been a quarrel. Some near friends of the President speak of the Sage's mind as in a state of such decay as to preclude the supposition that he is taking any interest in politics. That is the way Mr. Tilden always is described by Democrats who have fallen out with him. If Mr. Tilden has got so far, it must have been very recently. A few months ago he was in Mr. Cleveland's intimate councils, and was giving him points on the tariff, on appointments, and the like, which proved that he still retained a fair share of his intellect. It is said that the appointment of Mr. Hedden to the New York Collectorship was the cause of the coolness. Mr. Tilden had his candidate for the place, and wrote a letter in his behalf, which has been seen by credible witnesses.

IT is notable that while five Democratic State Conventions recently have endorsed the Administration, not one of them has committed itself specifically to Civil Service Reform. Mississippi comes the nearest to doing so. Pennsylvania is about the farthest from it. Yet in 1882, when there was a Republican president in power, the Democratic Convention of this State denounced "the spoils system" explicitly. It may be said that the endorsement of Mr. Cleveland implies so much. But this is not the truth. The unavoidable thing was to praise the President in their public resolutions, whatever they thought of his policy. And, besides, they have had very little reason to complain of the Administration in the matter of the offices outside the clerkships.

MR. CURTIS told his audience at Newport to watch the New York appointments if they wished to know how this Administration stands towards Civil Service Reform. It is now in order to watch the New York appointees. Mr. Curtis praises Collector Hedden for saying he is a business man who has no time for politics. The merchants are beginning to retort that Mr. Hedden is much more accurately described as a politician who has very little time for business. They could see Mr. Robertson promptly whenever they had business with him. When they wish to see Mr. Hedden they must wait till the politicians are done with him, and then send in a memorandum of what they wish to talk about. And this business man who has no time for politics can take the time to attend a meeting of the State Democratic Committee at Saratoga as Mr. Hubert O. Thompson's proxy and agent.

Mr. Curtis excuses Mr. Cleveland's removal of Judge Robertson and other Republicans from offices they had filled to the satisfaction of everybody, on the ground that a reforming president must have reformers under him to execute his plans. How this description applies to Mr. Hedden is shown by his promotion of three subordinates to higher places without examination, in defiance of the Pendleton law. It is shown in the case of Surveyor

Beattie by his rejection of two gaugers whom the Examining Board had declared competent, and without waiting for the expiration of the probationary six months the law requires. Mr. Beattie declares he found these men incompetent to solve certain problems in mensuration. But he admits that the knowledge they did not possess is not indispensable to the work the government requires of them.

Yes, Mr. Curtis, we shall watch the New York appointments with interest. And we shall watch with still greater interest the procedure of the President of the C. S. R. League, when he next addresses his constituency at Newport.

A DEMOCRAT, whom we may presume to have got what he wants, reminds his hungry and thirsty brethren that postmasters are being removed and replaced at the rate of one to each six minutes of the working day. This shows with what care for the public interests the Civil Service is being reconstructed.

MR. SHERMAN made his first speech in the Ohio campaign on the 26th ultimo, and it was a very good speech,—so good that it set all the Democratic and bolting newspapers off in a frenzy of oburgation. He reviewed broadly the political revolution we have just passed through, emphasizing its want of any rational basis, and the baseness of the means by which it was achieved. He called attention once more to the cardinal anomaly of the political situation,—a south solidified against the Republican party by men to whom that party exhibited the utmost magnanimity, and by the suppression of the votes of the colored men. He declined to yield to any bluster about "the bloody shirt," or "reviving the issues of the war." The war he hoped was over, but not the issue created by the violent and fraudulent overthrow of the arrangement on which the Southern States were restored to their place in the Union. Mr. Sherman is right in putting this issue into the forefront of the Republican case. An injustice is the one thing that will not be put out of sight until it is removed. The Republican party has been criminally remiss in every such word or act as could be taken to imply an acquiescence in the treatment the colored voter has had at the hands of the South. It is now awakening to the fact, and it must make its appeal to the national conscience against the wrongs upon free government and humanity which made Mr. Cleveland's election possible.

As for Mr. Cleveland, Mr. Sherman gave him credit for good intentions in the matter of Civil Service Reform, but believed that the men who were around him would frustrate these intentions. This is exactly the opinion of Mr. Edmunds as expressed in a recent interview. He showed that a president who stood for a party which did not believe in the reform, could not carry it out. He could not be personally responsible for one in a hundred of the appointments, and he must take the men who could control them from the leaders and representatives of his party. This is seen in the announcement made on behalf of Mr. Stevenson, who practically controls the appointments of all the fourth-class postmasters,—themselves nearly a majority of all the office-holders under the government. He means to replace Republicans by Democrats in all these offices, on the principle that the Administration should be responsible only for the behavior of its friends. And wherever a post-office is in a congressional district represented by a Democrat he will take the Congressman's recommendation as final. That is what we used to call "the spoils system."

WHILE the Republicans are entering upon the campaign in Ohio with apparent hopefulness, it would be idle now to predict its outcome. Two years ago, the prospect of Mr. Foraker's election seemed so good that for a time the Democrats were inclined to give up the state. Yet he was defeated, and he may be defeated again. But there are several elements of the situation which are more in his favor now than then. The irritation at the Republicans for the reduction of the wool duties has become more moderate, since they did their utmost to have them restored, and were defeated by Democratic resistance. It is now seen that the reference to the

subject in the Democratic platform of 1883 was a piece of humbug. Again, while it is true that the Prohibitionist party are in the field, it is also true that its leaders have been discredited. It has been proved that they took money from the Democratic Committee—who must have got it from the liquor dealers—to pay their expenses in 1883; and also that their present candidate for Governor, standing on a platform which denounces even the medical use of alcohol, did himself use it, "for his stomach's sake," and then denied that he had done so. His case seems to prove what had already been suspected—that the political preachers who run the Prohibitionist movement in Ohio have not put their affairs in good shape.

THE Iowa Republicans have adopted a long platform on national and state issues, which pleases Republicans generally. It is Protectionist most distinctly, and appeals to the Irish-American voters on that ground. It calls attention to the issue created by the suppression of the Republican votes of the South, with the effect of giving the rebel soldier two votes to the union soldier's one. And it insists that the prohibitory law shall have a fair trial before the State changes its policy toward the liquor traffic. On this platform Mr. Larrabee has been nominated for governor with marked unanimity.

IN Iowa the Democrats and the Greenbackers have achieved their usual fusion for the defeat of the Republicans. There is a shameful want of principle in the Greenbackers agreeing to this. They are always and everywhere Protectionists, as are the Republicans of Iowa, while the Democrats are avowed Free Traders. They agree with the Republicans on one leading question of national policy, and with the Democrats on none. Yet they try to help the Democrats to gain a victory whose only effect on national politics would be to strengthen tendencies they would deplore.

THE recent semi-decennial census of Massachusetts shows that the State has not advanced so rapidly in population as was expected, and that the increase is chiefly in the cities and in the population of foreign birth and parentage. Some of our New England contemporaries are far from gratified with this result, and speak of the decay of the Puritan population as a sort of inexplicable calamity. There has been no such decay. It is true that with the increase of comfort and the development of intelligence, the rate of increase in the New England population has been checked, as always happens. The rate of increase by which 40,000 English settlers grew to be 2,000,000 is no longer possible. But what Massachusetts has lost, other parts of the country have gained. The Puritan very early made the discovery that New England was a good place to be born in, provided you moved away when you were young. They flocked down into Virginia in such numbers that about 1640 they were asking a supply of preachers from Boston. They crowded into Maryland until they became the majority, and outvoted the Roman Catholics. They settled North Carolina at Cape Fear as early as 1658, twenty-two years before its first settlement from England. They went as a church and pastor to South Carolina, and one of the Cottons was pastor of another independent church of Yankees in Charleston, before the century ended. They came into Pennsylvania to take advantage of the easy terms and absolute tolerance offered then by Penn, and also to steal the Wyoming region from the Quakers in the name of Connecticut. Ben Franklin entering Philadelphia with his loaf under his arm was but a typical Yankee of that day; and the Yankee has been pushing on to every rising centre of population on the continent for two hundred years. There is a thin spreading of Yankees over the whole country, and everywhere they have done good service as examples of thrift, energy and pluck. As one New Englander has said, if Massachusetts had been just a little more barren than she is, she would have peopled the whole continent.

MR. DEFEW, the new President of the New York Central comes to the support of the recent South Pennsylvania transaction in a way which probably indicates the line of defence which will

be taken. He denies that Mr. Vanderbilt has sold a railroad, or that the Pennsylvania has bought one. All that there is for sale is a number of excavations, and an amount of road bed which might be of great value in the construction of a railroad through southern Pennsylvania, but which certainly does not constitute a railroad. This is ingenious; but we think the courts will hardly contemplate these preparations for a road apart from the valuable franchises granted in the charter. The sale has included much more than preparations, and if we are not mistaken a good part of the older roads secured by the South Pennsylvania fall within the prohibitions of the Constitution.

THE bad effect of Mr. Lowell's outburst of Anglomania has not quite worn off. In a recent address he assured his audience that his residence in England had not made him a whit less American. *Qui s'excuse, s'accuse.* Mr. Whittier sends him an address of welcome in the name of old companions, living and dead, but cleverly avoids this point.

IN Georgia the interesting quarrel over the material to be used in the State Capitol building continues, but has been transferred to the legislature. Georgia has excellent marble and fairly good granite. The commission to erect the capitol were limited to an outlay of a million dollars. They asked bids in all kinds of material, but the owners of the marble quarries asked too much. They were underbid by the agent of the quarries of oolitic limestone in Indiana, who furnished the stone for the Cooper Institute. The contract was awarded to the limestone men, and now the outcry is raised by the marble men, who wish the legislature to interfere on their behalf. They are right if their bid was a reasonably low one. Preference should have been given to native material, other things being equal, or even if the inequality was not a great one. But if they presumed on their monopoly of the building material of the State, and asked more than was reasonable, they should have no relief.

IT is a good thing that the members of the legal profession are becoming aware of the serious defects which attend the administration of justice in the United States. A report to the Bar Association on the "Law's Delays" shows that the average length of a lawsuit varies from eighteen months to six years according to the states in which it is prosecuted. The uncertainty varies from 18 to 55 per cent. of reversals, on appeal to a higher tribunal. This shows that our machinery works but clumsily, and it is fortunate for the lawyers that merely a minority is directly affected by these evils. If the majority ever went to law, it would sweep away the whole of our modern improvements, and go back to something as simple as the Turkish *cadi*, or the Hebrew judge "sitting in the gate."

THE American Association for the Advancement of Science met this year at Ann Arbor. It adopted a series of rather unwise resolutions, whose object was to break the force of the recent report on the abuses in the Coast Survey. It is true that the charges against Professor Hilgard and his associates were not directly rebutted, but the praise lavished upon the work of the Survey, and the protest against the presumption of the Commission in pronouncing upon the uselessness of part of it, must have the tendency to weaken the force of the report, if it have any effect whatever. We do not believe that it will have any effect, or that it ought to have any. The new Church of Science can assume airs of infallibility as freely as did any of the old churches. The claim that only scientific men can pronounce upon the usefulness of any piece of scientific work may have its place when the time and money expended in its prosecution are those of the investigator. But scientific work for which public money is asked, must commend itself to the judgment of the unscientific public as well, or there will be no appropriation.

Some of the work done under government auspices and published at the public expense is of a kind that ought not to be done

in that way. When the authorities of the geological survey publish their anthropological speculations at the national expense, and disparage the religious convictions of the American people in public documents, it is time to call a halt. There is no objection to the free publication of such opinions by any and every proper channel. But they have no more right to the place where they appear, than would an argument on the fourth dimension of space.

MR. GLADSTONE, after his trip to the Norway coast, and his wonderful walk ashore, proving the vigor of his limbs, if not of his vocal organs, has reached Aberdeen on his return and landed there. A dispatch contains the significant statement that before leaving the yacht, (Mr. Brassey's famous *Sunbeam*), he addressed the crew in a little speech, with a strong voice. This is interesting, if true, but it seems to be reserved to a later date for us to learn precisely whether he is in a condition for really taking part in the campaign now near at hand.

IT is given out that the Afghan dispute is positively settled. This is, however, not upon official authority, but upon a statement by a Brussels newspaper. The probability is that it is true: the policy of Russia, for some time past, has been to keep the peace for the present, holding the advantages she has gained, and meanwhile extending her railway system into Asia, and strengthening her navy. In due time she will begin again her forward movement.

THE cordial relations between Germany and Spain, which have lasted ever since King Alphonso was assaulted by the Paris mob, have been wrecked by Germany's aggressive colonial policy. The Caroline Islands always have been registered by modern geographers as a Spanish possession. It is true that no Spaniards have colonized them, that no government has been established over them, and that as late as 1868, England and Germany jointly gave notice that they did not regard the claim valid unless reinforced by actual possession. The Spanish claim is no more than a reminiscence of the time when Spain was a great colonizing and exploring power. It is characteristic of the decayed nations to cherish such reminiscences with great enthusiasm, and the occupation of the islands by a German fleet has produced an outburst of indignation in Madrid, which for the moment eclipses the horrors of the cholera epidemic. Germany has good reasons for wishing to avoid any collision. Spain is at least a power in the game she is playing in European politics, and the tone of the communications from Berlin to Madrid is conciliatory. But the Spaniard is a thin-skinned being, and nothing less than the withdrawal of the ships will satisfy him.

THE CONDITION AND OUTLOOK OF BUSINESS.

AFTER so long a period of depression it would be a most agreeable duty to report evidences of recovery. But as yet there are none of these of enough substance or weight to inspire confidence. There is an increase of activity in the iron manufactures of Pittsburg, a result of the advantage which they have in the use of natural gas for fuel. There is in various quarters a starting up of textile mills that had been idle or working languidly, this being the result they had been expecting to secure by holding off. Furnaces in Alabama and Tennessee have been put in blast to make iron of exceptional quality or cheapness. The steel-rail mills, after an interchange of counsel, are stiffening prices by keeping a steady hand on their limited production.

It would be wrong not to perceive in these circumstances some easement of hard conditions. But they are, unfortunately, not controlling facts. They do not either make or indicate the true situation. Let us consider the greater features, and see what is the reasonable outlook for business.

Most conspicuous is the railroad situation. This is almost as bad as possible. While much is said of ending quarrels and ceasing wars of rates, it does not appear that these wars are over.

On the contrary, they continue; and, what is more, the only remedy seriously proposed is that of wrecking competition and adding the capitalization of the wreck to the already great burdens of the survivors. How it can be expected that railroads are to make more money for their stockholders, in the near future, except by laying additional onerous exactions on local traffic, to the danger of its complete ruin, it is difficult for an impartial observer to perceive.

The railroad situation is, of course, complicated with other great matters. And two of these,—grain and coal,—are now particularly discouraging. If it were not for the surplus from the harvest of 1884, our wheat crops of 1885, with a good European demand, would have to be counted a disastrous failure,—the worst for many years. But having that surplus, and the European demand being light,—for reasons to be presently mentioned,—it results that our wheat has fallen to prices that in the long run would be ruinous to the mass of farmers. At such prices our usual export of wheat would count us comparatively little in our balance of account abroad, while unfortunately the quantity which we can market is diminished. We are cut thus on both sides. The danger of war between England and Russia is entirely past for the present, and the Russian crops will come forward freely through the open ports of the Black Sea, while no threat of attack upon the Suez Canal discourages the free movement of India wheat by that route to the English markets, and the quantity coming is larger than ever. The harvest in Great Britain is fairly good,—the acreage being somewhat reduced, but the yield per acre an average one,—while the Hungarian crop is reported excellent.

The sale of our wheat abroad, therefore, must be moderate in quantity, and at low prices. The question naturally arises, Can our railroads grow rich on a small carriage of cheap grain?

Again, the coal business is in bad shape. And to speak of it thus is to use the mildest language possible. The combination of anthracite miners is practically dissolved. The quantity mined this year will be two, possibly three, millions of tons less than was proposed, yet the market is full, and all storage room awaiting the market is gorged. It is the testimony of all who know the facts that never was there so much unsold anthracite above ground. And yet, with the certainty thus afforded that thirty-one or even thirty millions of tons cannot be marketed, it is well known that the necessities of some of the parties to the combination forbid them to consent to a reduction of their shares. It seems certain that anthracite mining will not be made profitable for some time to come, that prices must be low, and that railroad tolls on coal must decline rather than advance.

If the prospect for existing railroads is bad, there can be no great quickening of the construction of new roads. The demand for steel rails may therefore remain for another year, about as it has been during 1885. The mills could make about 1,800,000 tons a year; they will really produce, say, half that. As to the furnaces, over one-half of them remain out of blast, and we mean to speak, in this, only of those which are so situated and constructed as to conform to the modern requirements of their business. Now it is not easy to see how, with but little new railroad building, there can be such a call for iron as will make the furnaces lively.

But upon the top of this comes a further most serious consideration. What is to be the action of Congress? The Tariff, we are now told, is to be overhauled. The duties on a number of articles, including wool, lumber, iron ores, coal, flax, and hemp, are to be either diminished or entirely abolished. That a programme which includes such features has been drawn up is well known. A reduction of revenue to the extent of thirty—or perhaps forty—millions is proposed, and this is expected to be accomplished by reducing rates in some cases, and by adding to the free list in others. If it should be possible to carry through such a measure, the consequences must be disastrous, but the very proposal of it is a menace of the most serious sort. If coal is to come in more freely, in competition with our own, the blow will fall upon an interest al-

ready upon the verge of distraction. Bituminous coal would seem to bear the injury, but as a matter of fact its depressed condition and low prices cause the present demoralization of anthracite, whose market it has been steadily invading. We need not dwell upon the wool question; the present urgent demand of wool-growers is for an advance in duties, coupled with higher rates on woollen goods, to protect manufacturing; and the bare suggestion of a further reduction must be a serious cause for alarm and discouragement.

This, though by no means a complete view, shows some of the main facts in the condition of business. They are, unfortunately, all of an unsatisfactory character, and they can, we fear, be represented in no more cheerful way, unless we are to encourage expectations that in the end will do more damage than even an excess of caution. It is the duty of American business men to look at the present situation with a clear eye and a cool judgment, measuring its defects without unreasonable conservatism, but at the same time with a due appreciation of their seriousness. For this is not a case where it will serve for the business community simply to imagine themselves better off. There must be a distinct and definite change in all, or nearly all, the principal features of the situation, before a real improvement can take place.

THE RAILROADS IN PENNSYLVANIA POLITICS.

THE Democrats have shown themselves wise in their generation by taking up the South Pennsylvania Railroad question. And Mr. Cassidy is doing well for his party by pressing the question before the courts. The Democrats are in great need of a fresh and workable issue in our State politics. If the Republican majority is ever to be broken down in this State, it will not be by threshing the empty straw which has heretofore occupied so much of the time and attention of the Democratic conventions. They must take up some one of the genuine grievances of the people, and commit themselves so heartily to its removal that the average voter will feel some assurance that Democratic votes in the Legislature will correspond to Democratic promises in convention. When they do so they will win votes and hold them, and the day of Republican confidence and indifference will be past.

We are not aware that the Democrats of Pennsylvania had any especial right to pride themselves on their previous record in this matter. They have had control of one branch of the legislature more than once since the new Constitution was adopted. Governor Pattison has shown himself extremely exacting with reference to other failures of the legislature to pass laws required by the Constitution. But neither the Governor nor the Democratic majority in the House paid attention to the constitutional requirement in the matter of railroad regulation. Not until there was evidence of a popular stir over the question did the party venture to take it up, and then only on the narrow issue presented by the absorption of the South Pennsylvania and the Beach Creek railroads. Even now they give the public no pledge that they as a party will do their utmost to secure to the people the advantages the new Constitution offers them. They merely denounce a single transaction without pledging themselves to work for the legislation which would put an end to all transactions of that class. It is useless to say that they are not responsible, as they have not the majority. If they were solidly united for the enforcement of the railroad clauses of the Constitution, they would find Republican recruits enough—willing or unwilling—to make a majority.

But with all these drawbacks to the moral force of their action, the Democrats have done well for themselves in taking up the question. Yet we regret that it has fallen into their hands. The railroad question, like the banking question, and the currency question, is sure to suffer at the hands of demagogues. And the leadership of the Democratic party has fallen so largely to demagogues of late years, that it cannot be depended upon for a statesmanlike treatment of any question which calls for nice discrimina-

tions. It has banished its Pendletons and deposed its Thurmans, and has come to look for "light and leading" to men whose cue is to watch for any drift of opinion that may bring votes. This is seen even in the present case.

The public cannot afford to have the railroads treated in the fashion which demagogues are sure to favor. The industrial and even the political welfare of the country is bound up with their success and prosperity. But for the railroad and the telegraph our country would have become too unwieldy for a national government, and would have fallen to pieces by its own weight. But for the close and constant interchanges they furnish, the localizing or state rights tendency would have got the upper-hand, and the national unity would have become as weak as in Mexico. To the railroad and the telegraph we largely owe the rise and the growth of that strong nationalist feeling which carried the country unbroken through the strain of civil war, and has modified our political system to a far greater extent than we have amended the Constitution. It is the railroads and the telegraphs which place Oregon and Texas in closer proximity to Washington than New York was in the days of stage coaches.

It is to railroads that we owe the rapid utilization of our natural resources, and the equally rapid assistance of any needy section from the resources of the rest. A West Virginia drought ruins the pasture, and the cattle die by scores. A little narrow-gauge which runs into their district works day and night to its utmost capacity to bring them hay from more favored districts. Millions of money are saved to that district, and its imperiled future is secure. And this is but one of a thousand instances.

It is not with so great a system as this that we can afford ignorant or heedless meddling by legislators. Tennessee, Connecticut and perhaps half-a-dozen other states can tell us where that leads. But the day has gone by when any state of the Union will be contented to let the railroads do as they please in the exercise of the valuable franchise the State has conferred upon them for the public benefit. If the railroads are not out of their senses they will recognize the fact, and will welcome such a system of regulations as will be fair to both themselves and the public. The experience of England, of Massachusetts, of New York, are ample indications of the line on which such legislation as is required might be effected. It is not a hard and fast rule that transportation charges shall be in strict proportion to distance that we need. It is a railroad commission, with discretionary power to require for the public every reasonable accommodation and security, to compel fairness in freight charges with due allowance for the element of greater cost in short trips, and to require such a system of accounts and of auditing as will enable the public to know exactly where every road stands in a financial sense. At present we have none of these things. Dealing in railroad securities is gambling now, because nobody can tell the value of the published reports. Time tables are systematically adjusted to prevent passengers on one road from making connections with the trains of a rival road which it crosses. Important portions of track are allowed to run down far below the danger point because it is not convenient to have old ties and rails replaced. And freight forwarded to or from points at which there is no railroad competition is charged exorbitant and even prohibitory rates.

We were shown recently a number of freight bills paid by a large lumber merchant to two of our great trunk lines. There was not one among them which was not scandalously excessive. For carrying hay seventy-five miles, \$12 a ton was charged. Different rates per ton were exacted for carrying different kinds of timber, although the road had no more trouble and took no more risk in handling walnut than in handling white pine. But the accounts towered up the highest where the timber was transferred from one road to another. Unreasonable as are the charges made to their own customers, they are moderate in comparison with what is asked from the customers of other roads. And our informant assured us that these rates were sometimes arranged, not with reference to the interests of the railroad itself, but with ref-

erence to those of business rivals. The lumber men of one Pennsylvania town, finding a West Virginia competitor troublesome, secured such charges on its transportation into this State as were prohibitory.

Mr. Atkinson, in his dealings with the subject, makes much of the low charges made by our railroads for food and the like carried over great distances. For such low charges the railroads recoup themselves by high charges on local freights. Northwestern wheat gets to the seaboard at the expense of the farmers of New York and the miners of Pennsylvania. It is as cheap to send goods from Chicago to a seaboard city as to send them from a county near the seaboard. This is a state of things which the eastern farmers and miners will not much longer endure, to which proper railroad regulations would put an end, and which may furnish demagogues with the materials for mischief.

TORNADOES AND TORNADO ACTION.

THE north-eastward extension of the tornado area this summer recalls the storms of years ago which Espy, Baché, Hare and other pioneers among our meteorological observers described in New York, New Jersey and Connecticut, when the more frequent occurrence of these whirlwinds in our western territory was hardly known; and it is as surprising to see how well the general features of tornadoes were learned when the only examples for study were the few sporadic storms of this eastern part of the country, as it is regrettable to notice how little of trained and discriminate observation is reported on the recent tornadoes that passed over the older and more thickly populated states. The one that passed up the Delaware, devastating Richmond and Camden, although witnessed by thousands of persons does not seem to have had a single observer watching it critically; and while the newspapers give many columns to the description of the general appearance of the storm and its destructive effects, no advantage seems to have been taken of this unhappy opportunity to detect certain motions in the clouds that would tell directly for or against the theories that have been proposed to account for tornado action. A tornado is a very elaborate natural experiment, and it will have to be followed by acute observation, well informed of all that has been determined and suggested about its action, before all its mechanism is understood. Although rather late in the day, I venture to send you the following notes on the theory and observation of these storms.

In the first place, as to their name. It is most unfortunate that the words tornado and cyclone are now so thoroughly confused in popular usage. As used by the earlier writers, tornado was applied to a violent local storm, distinguished by the presence of a whirling pendent funnel cloud, rapidly passing with great destructive action along a narrow path. Lieut. Finley's work in the Signal Office has shown how constant these characteristics are. Cyclone is the name suggested by Piddington some forty years ago, and accepted by Redfield, Reid and all modern meteorologists to include the hurricanes of the West Indies, the typhoons of the China seas, and the then unnamed great storms of the Indian ocean. A typical example of such a storm has just traveled (Aug. 24, 25) from the warmer latitudes along our shores, doing much damage in Charleston and elsewhere on the southern coast. It is at once distinguished from the tornado or its marine equivalent, the waterspout, by its duration over many hours, its extension at one time over hundreds of miles of land and sea, and the generally gradual shifting of the wind's direction. Viewed in a large way, as on the synoptic maps of the Signal Office, these cyclones are readily seen to be rotating storms, turning in the same way, from right to left, as the tornadoes, but their diameter is so great that their rotation is not distinctly perceptible. The storms of both classes are accompanied by rain or some form of precipitation, which is always heavy when the storms are violent, and it is now well understood that much of their supply of energy comes from the "latent heat" liberated by the rapid condensation of so much vapor. A circular was issued last winter by the Chief Signal Officer, requesting editors of newspapers to use the words tornado and cyclone in conformity with such definitions as the above, but very little improvement in popular usage is to be noticed this season, and it is almost hopeless now to correct the error.

The rapid left-handed whirling of the central funnel cloud in a tornado is now established by direct observation in so many cases as to leave little room for doubt of its constant occurrence, although some are still skeptical on this point. Rotation of the cloud was definitely reported in the Philadelphia storm; but few observers made statement as to the direction of turning. As in nearly all tornadoes, the cloud was reported to "descend to the earth" or "plunge down to the ground," and this by the same observers who see its whirling winds bearing heavy objects aloft.

The contradiction arises from mistaking a downward growth of the conical cloud for its downward motion; at least, it is by this explanation that the reports are best reconciled. The cloud seems to descend because the limit of the space in which the invisible vapor is condensed into visible cloud, increases downward faster than the cloud particles are carried upward by the air in which they condense. Franklin recognized this simple explanation over a hundred years ago, and yet it is still doubted by some. It is of the greatest importance therefore that some one with acute sight and rare presence of mind should watch the growing funnel cloud so sharply as to determine whether the cloud fibres at its base do or do not rise into it, while the rapid addition of freshly condensed fibres rising from below, gives the funnel the appearance of descending towards the ground.

The motion of the clouds overhead while the tornado is in sight is also an important matter; and it should be further noted if possible whether they are forming or dissolving at their edges. The position of the tornado with respect to the accompanying rain and hail would also be of value. In any record, the time of occurrence of phenomena, recorded at least to the nearest minute, is essential: the watch or clock by which the record is made should be compared with a standard time-piece within the following twenty-four hours.

Among the many theories proposed to account for the origin and action of tornadoes, there is none that approaches the one suggested by Professor William Ferrel, formerly of the Coast Survey, and now engaged in the Signal Office. His papers, published as appendices to the Coast Survey reports five or six years ago, are beyond question the most important contributions to dynamical meteorology that have appeared in this country, and are recognized as having few equals abroad. They are largely mathematical, for one of the strongest points in his work is the careful study of suggested physical processes to see if they are sufficient in quantity, as well as proper in quality to account for the observed facts. His calculation of the velocity of a rising current of air needed to carry up drops of rain to an altitude where they would be converted into hailstones, is an admirable illustration of his methods. It is to be regretted that his writings are so little known, for, in addition to the mathematical discussions, they contain most readable comparisons of theory and fact, which may be cited as classic models of the process of verification that follows observation and hypothesis in all finished scientific work.

A brief statement of Ferrel's theory may be given as follows:—The essential condition antecedent to tornadoes is that of unstable equilibrium in the atmosphere; the lower air must be unduly warmer and moister than the upper air, so as to tend to upset easily, much as a layer of oil will tend to rise through an overlying layer of water. This is abundantly confirmed by the sultriness of tornado weather, by the occurrence of tornadoes chiefly in warmer months and hours, by their frequency in our western states, where the warm, moist air from the Gulf contrasts strongly with the cool, dry air from the north-eastern plains, and by the limitation of tornadoes to the south-eastern quadrant of our cyclonic storms, precisely where observation and theory show these contrasts most distinctly developed. Thunder-storms seem to require similar conditions for their formation, but their mode of action is different. If the inversion of the warm, moist lower air and the cool, dry upper air is accomplished by upward draining from the lower strata through the upper, as is visibly the case in dusty whirlwinds in desert regions, then a tornado results at every point where the upflow takes place. Hence the frequency with which several tornadoes happen near the same time and place. On the nineteenth of February of last year Lieutenant Finley's charts showed fifty-seven tornado tracks in the southern states, all dependent on the unstable equilibrium in the south-eastern quadrant of a single cyclonic storm, whose centre passed over the lower lakes that day.

Why do tornado winds whirl around, and how do they attain their irresistible strength? This is best illustrated by considering the eddy formed in a basin of water, as it runs out at a vent at the bottom; with however little circulatory motion it begins, a well-marked whirlpool will soon be formed at the centre; its rotation may become so rapid that the centrifugal force there exceeds the weight, and an open core is formed in the axis of the whirl. This is in accordance with a well-known mechanical law, which may be looked up under the name of the "preservation of areas" or the "conservation of momentum," if any readers have a disposition to go so far; but which is sufficiently stated here by saying that, in such a rotating fluid, the velocity of rotation tends to increase just as the radius of rotation diminishes; hence imperceptible circulatory motion at the margin of the vessel is magnified into a rapid whirling as the water approaches near the centre. Precisely the same law demands obedience in a desert whirlwind; in a waterspout at sea; in our tornadoes on land; and in the great rotating cyclones. Redfield recognized this point clearly years ago. The violence of tornadoes is therefore not at all dependent

on the conflict of already violent winds. The constant left-handed rotation of cyclones (in this hemisphere) depends on the deflection given to their winds by the rotation of the earth—one of the most beautiful principles in meteorology—and the constant left-handed rotation thus far noted in tornadoes depends on their arising in masses of air that are at the time participating in the much larger cyclonic rotation. The relation is precisely the same as that by which astronomers explain the agreement between the rotation of a planet on its axis and its revolution around the sun; both are left-handed, or from east to west; and from the revolution of the planet to the whirling of its tornadoes, there is a direct genetic connection. If the earth had run around the sun the other way, the sun would rise in the west, we should have the climate of California, and tornadoes would spin to the right—but they would tear the salt-works to pieces just the same, if they passed along that way. The turning of the air around the point that is to be the tornado-centre is at first entirely imperceptible; but there is a faint rotation with respect to that point (or any other) in virtue of the cyclonic motion of the air as a whole around the neighboring area of low barometric pressure, generally a few hundred miles away to the north; this serves as a beginning, and is increased to a violent rotation as the storm develops so that the central upflow is fed with air from a more distant circumference. The increase in velocity must be especially marked in the air a few hundred feet above the ground, where very little of the theoretical acceleration is resisted by friction; and there, just as in the eddying water, the centrifugal force near the axis of rotation may become so great as to rarely the air in the core of the whirl by taking off most of the lateral pressure from it. Now it is well-known that when air is rarefied or expanded, it is thereby mechanically cooled; hence when the above-described rarefaction goes so far as to cool the central air below its dew-point, a cloud appears in the axis of the whirl; first just beneath the level of the heavy cloud-mantle under which the tornado is generated; then at lower and lower levels, as the whirling is developed in greater and greater strength; and this sufficiently accounts for the funnel-cloud and its apparent "descent." Near the ground, where the air is prevented by friction from attaining the full measure of velocity that the "preservation of areas" desires, it is much less controlled by centrifugal force, is therefore drawn almost radially into the central semi-vacuum of the roaring whirl above; but close to the centre there is probably a distinct whirling in all cases, even at the ground, and therefore trees are thrown down in opposite directions according as they fall in the front or the rear of the storm, or to the right or the left of its path. The storm does not stand still, because it is generated in a mass of air that is moving as a whole; the motion is generally northeasterly, as is proper to the southeastern quadrant of the broad cyclonic storm in which the tornadoes occur; and its velocity is from twenty to thirty miles an hour in most cases, which agrees very well with that of the winds at such a time a thousand or more feet above the ground, in which the whirl is best developed. The tornado blast is most violent on the right or southeast side of its track, for there the velocity of rotation and translation are combined; hence, if the choice is allowed, run away to the north or north-west when a tornado funnel is seen hanging from the clouds at the south-west.

W. M. DAVIS.

Cambridge, Mass., August 26.

HOVENDEN'S ETCHING OF JOHN BROWN.

TO those who grow disheartened at the aimlessness, or at least the lack of anything like high purpose, which is the most depressing thing about current art, and to which the unquestionable improvement in technical skill only gives additional emphasis, Mr. Hovenden's strong historical picture, "The Last Moments of John Brown," came like a glorious promise of better things. And to those who have grown tired,—to use no harder expression—of the feeble scratching on copper which has, in so many cases, done duty as artist-etching, this splendid print of the same work, from the hand of the master himself, is not less refreshing.

It is a very safe and moderate statement that no art work of recent years has possessed anything like the interest for the American public which attaches to this picture. No one who has contrasted the eager and sympathetic faces in the throng which has pressed to see it wherever the painting has been exhibited, with those of the meagre company which saunters through the galleries where the regular exhibitions are annually held, could fail to be struck with the difference, or to rejoice at this evidence that art, when it is healthy and genuine, and strikes the right chord, still exerts the old power. A great deal of this interest is due to the subject, no doubt, or rather to the fact that the picture has for a subject an incident of touching interest in the life of an epoch-making man. But it would be a great mistake to regard the success of the picture as due to this choice of a striking sub-

ject. Some of the worse failures have been associated with attempts at the highest themes. Mr. Hovenden has treated a fine subject in an impressive and skilful manner; that is the reason why the critical, as well as the uncritical, take off their hats before it.

Perhaps the most striking quality to be noted in the painting is its simplicity,—its absence of fuss, and of everything that savors of a straining after effect. No great picture ever had less of the theatrical element. Yet, at first sight it would seem to be a kind of subject to invite such an element. A "stunning" effect of light that would have startled the observer like a crash of stage thunder; strange and stately movements in the figures that should lift the action out of the common course of things, and into that region where they seem just real enough to stimulate the imagination without making any appeal to the judgment; all this would have been so natural, and so easy, too. But that is not Mr. Hovenden's way. "Let us have the plain story," he seems to say; "if that is not tragedy enough I cannot make one out of it. If the sun was clear and the morning was calm on that particular day, let us paint it so. If this brave man walked calmly to his death, betraying, as those who saw him said, less emotion than any of those who surrounded him, let us represent him looking just that way."

No American painter has ever carried this feeling so far. We have other painters who are realists in theory, but strangely enough they have, in practice, so much of the impressionist's method, that is they leave so much undone and trust so much to the imagination of the observer, that one is inclined to think they might as well trust a little more to their own. But Mr. Hovenden is a realist thoroughly and consistently. No painter among us carries the execution so far without sacrificing its freshness. Probably we have no painter who is a sufficient master of his craft to do it. In this respect his example is invaluable at this time, for anything he does is a standing reproof against the slipshod methods so much in vogue.

The etching just published is remarkable for the same qualities which distinguish the painting. It shows how much can be accomplished, after all, in a style of engraving which is usually regarded as decidedly imperfect and only suited to work of rather a positive and striking character, as different as possible from this picture. Of the picturesque freedom of line and the play of capricious light which delight the heart of the connoisseur in the etchings of Mr. Whistler or Mr. Pennell, there is nothing here. The line is free in the sense that the severe draughtsman's line is always free,—that is all. There is none of the constraint which one always feels in the work of even the best of the engraver-etchers, but every line has something to do besides being a caprice, however interesting. The artist has really worked for tone, and has obtained it too. Not the tone of the original painting, of course; that was out of the question; but a harmonious adjustment of subtle values in the print which is as far as possible from the quality which the etcher is accustomed to try for.

It is certainly evidence of most remarkable power that an artist who has achieved Mr. Hovenden's reputation as a painter pure and simple, as a master, that is of subtle and elusive tones,—should almost without experience in this distinct art, at once achieve so signal a success. For not only has so brilliant a plate never been produced in this country before, but so far as I know no work of its magnitude has ever been undertaken. By magnitude, of course, is meant not so much the size of the copper—though it is doubtful if even in this respect the plate has any rivals—as the difficulty and importance of the subject.

The composition embraces some fifteen or twenty figures, and there is perhaps no recent work with which to compare it unless it is Waltner's etching of Munkacsy's "Christ before Pilate," a plate of about the same size, and a very strong, satisfactory work.

And, indeed, in its reliance upon the effects which are usually regarded as the peculiar property of etching, effects to which Munkacsy's sombre painting lent itself very readily, this etching of Waltner's furnishes just the kind of comparison which is necessary if one would fully appreciate the extent of Mr. Hovenden's technical triumph. Its, (Waltner's) artificial lighting, the few strong lights being thrown just where they were wanted, and great masses of the picture being placed in shadow to give brilliancy of effect; this is the old way, it is true; the way that Rembrandt taught, and the way that artist-etchers accepting his leadership had almost come to regard as the only way. Yet it is not the only way,—good a way as it may be, when properly employed,—as Mr. Hovenden now proves to us.

This beautiful print is not only the most substantial addition that has yet been made to American etching: it has enlarged the scope of the art itself, and will assist in the adjustment of all art to the modern realistic idea, which is already accepted theoretically at least by the painters, and fully adopted in almost every other branch of imaginative work.

L. W. M.

MEXICAN RAILWAYS.

INVESTORS in Mexican railway securities are supposed to have received a severe shock from the attitude of that Government towards them at present, and on the decree of President Diaz suspending the payment of subventions to railways, the bonds of the Mexican Central shrank 20 per cent. in market value at once. A Boston correspondent of the Mexican *Financier*, the representative of foreign investors in the capital of that country, explains that panic as arising from the unloading of small holders who could not afford to wait for returns upon their securities, and, after saying that the wealthy holders were confident of a revival of better times, adds, that "if the Mexican Central Railroad Company should call for another loan, of not immoderate amount, it could get it." This confidence stands in marked contrast with the alarming reports which have recently appeared in the newspapers, concerning Mexican repudiation of obligations.

It is a singular fact that, while the revenue of the Mexican Government increased 60 per cent. in the year when the Mexican Central began construction, while the customs advanced 70 per cent. from that year to 1883-4, and the export business of the country has nearly doubled in the same time, the Government should pass into severe embarrassment, notwithstanding that practically no interest was paid on the public debt. Nor can it be the payment of railway subventions which is the source of the trouble. These subventions were issued in the form of certificates or scrip, upon the construction and acceptance of fixed mileages, and they were redeemable in the payment of custom duties, importers being obliged to use a certain proportion of them under penalty of fine. There are but two companies which have received this scrip, unless the road from Nogales to Guaymas be considered a separate one. Together these companies are entitled to a redemption at the rate of 14 per cent. of all the customs dues of the country, and of the \$30,000,000 in round numbers of these certificates issued, only about \$6,000,000 have been retired. The rate has scarcely been \$2,000,000 a year, and that upon a steadily increasing revenue.

Another peculiarity in the situation is that both the city and the national government of Mexico are anxious to borrow money, and in order to establish its credit the latter has made three attempts to refund its heavy English debt, in four years, the first two of which were overruled by the national Congress, in obedience to popular clamor. The city is growing rapidly, and is in pressing need of money for improvements. Its drainage is bad, its streets ill-paved, its water supply limited. It is authorized to make a loan of \$2,000,000 on hypothecated public property, and it cannot get the money it wants. Under such circumstances the most injudicious policy would be to impair the public confidence.

Yet Mexico is undeniably "in a tight place." The weekly balances in the national treasury for months have scarcely exceeded \$50,000, and often have been below that sum. The administration of President Diaz has dismissed all needless officers in the Civil Service and cut down the salaries of the rest, he himself submitting to a reduction. A year ago, in a wild effort to avoid bankruptcy, the government raised the stamp duties to a rate that threatened the extinction of trade. The Mexican papers and those who are well-informed on the subject, remark that the government put the knife of retrenchment upon itself before it touched the subsidies, and they insist that their suspension is only temporary, and forced on an administration which has neither money nor credit.

What becomes of all the revenue which Mexico receives? It has ranged from \$30,000,000 to \$35,000,000 for the last four years. The heaviest items of expenditure are Public works (nearly half the revenue in 1883-4), the Army and the Exchequer. In the last year of the Gonzalez administration, the Exchequer expenses were \$5,000,000.

The government has been borrowing of the National Bank and anticipating its income at a heavy expense. There were outstanding a large amount of treasury certificates, besides the subvention scrip, and the arrears of current expenses, which were nearly \$6,000,000 when Gonzalez was inaugurated, increased under him. If the government had credit, it could fund its heavy floating debt, but as it cannot borrow, the only other resource now is to pay it off out of the revenue, which will take a year or more. Then the course the government takes will show whether it means to be honest.

D. O. K.

WEEKLY NOTES.

AN intelligent gentleman remarked some time ago within the hearing of the writer, that he had been studying the *personnel* of the Salvation Army, and thought its existence was in large measure the result of hard times. "These people have none of the marks of a genuine religious enthusiasm. They have gone into this as a business because they have nothing else to do, and be

cause the methods used by the Army make no demands upon them which they cannot meet." We do not think this a fair estimate of the whole body of the Salvationists, but it may be true of many of the subordinates. It finds some confirmation in the scandal affecting more than one of the members of the Army. Thus a woman prosecuted for bigamy in New Jersey recently admitted that she had joined because she was a good tambourine player and liked that sort of life. It is said that in India the Army has a great success through not being particular as to the people it enlists. It has staggered at nothing—Moslems, Hindoos, of all characters and of no character, swell its ranks, and the missionaries believe it has done a vast deal of harm to the work of missions. And yet is not the Army the logical outcome of the conversion—the "first I felt uncomfortable, and then I felt better" theory of Christianity? Is there any logical standing ground between the Salvation Army and the theory of Christian nature advocated by Dr. Bushnell, and imbedded in the disciplinary legislation of all the Protestant bodies which are older than the Methodist movement?

* * *

As we anticipated, the committee of the New York Yacht Club has formally designated the *Puritan* as the defender of the *America's Cup*, in the races at New York next week. There will be very great public interest in the contest, and its result must be regarded as uncertain. The swiftness of the *Genesta* is conceded upon all hands, though the belief in New York appears to be that the *Puritan* is at least her match.

* * *

VASSAR COLLEGE, whose presidency has been vacant for some months, since the resignation of Dr. Caldwell, now has the place filled, the Trustees having elected, on the first instant, Rev. Dr. Samuel W. Duncan, a Baptist minister of Rochester. He is a graduate of Brown University, and is reported a man of culture, as well as business energy. The value of a good matrimonial partnership was apparently illustrated in the selection, as it was stated that Mrs. Duncan "is a remarkable woman, intellectually and socially, and would be an important addition to the college."

* * *

ONE of our contemporaries has administered a rude blow to the prestige of the legal profession and to the self-respect of the bar, by disclosing the fact that a considerable number of our Philadelphia lawyers write poetry of various degrees of badness, and that some of them have had their productions printed. If there be one superstition which the Philadelphia lawyer cherishes more warmly than another, it is that the law is an absorbing profession. Other men may dabble in matters outside the work of their professions; but a lawyer has but one mistress. Themis is too exacting to leave room for the Muses. We have known young lawyers to regard themselves as seriously compromised by the discovery that they had done a piece of really good work in literature, even though it exhibited capacities which must prove of the highest utility in their professions. We also have known a few who have ignored this notion, and who have written much better poetry than any man on *The Press's* list, which is very incomplete. The truth is that verse-writing is one of these secret and awful indulgences, which fascinate the Philadelphia lawyer by being so frightfully improper and unprofessional. Hence its attractions for many good and well-meaning people, who certainly write *invita Minerva*.

* * *

THE funeral of General Grant cost, it appears, something less than half the thirty thousand dollars talked of. At least this is the exhibit made by the undertaker, which amounts to \$14,162, and has been audited and sent to Washington. Of this \$5,040 is for the carriages used in the procession, and \$1,800 for the coffin, and the remainder covers the charges for the steel burial case, the funeral car, and the various mourning emblems furnished to those who took part. Many expenses were paid otherwise—those at Albany by the State, the draping of the New York City Hall by the city, and the draping of railroad trains, etc., by the railroads.

REVIEWS.

SPIRITS IN PRISON, AND OTHER STUDIES ON THE LIFE AFTER DEATH. E. H. Pluntre, D.D. Pp. 416. London: William Isbister, Limited. 1885.

AT a time when the whole question of a future existence is called in question by the materialistic psychologists, and ignored by many inductive scientists as a problem beyond the scope of opinion, there still remains a function for the theologian. No small share of the doubt cast upon the soul's immortality is a reaction from the sombre and even terrific views propounded in the old creeds, and enunciated by the conventional pulpits. Of course the gap between pure induction and belief in inspiration is not

easily closed, but the verisimilitudes of Bishop Butler go far to narrow it, and if the ghostly world were brought into nearer parallelism with the present, faith in it would not be so arduous. Professor Pluntre has added his well pondered and able suggestions, from the purely theological standpoint and by purely critical methods, to a reinforcement of the faith in immortality. Contemplating an original treatise on the subject years ago, he saw the ground preoccupied by the movements of English intellectual life. Three events in lingering succession filled the horizon, and anticipated his researches. They were Maurice's controversy with Dr. Jelf, which led to the expulsion of the former from Cambridge, the prosecution of the essayists and reviewers, and Canon Farrar's "Eternal Hope." The popular sympathies of the intellectual world went with Farrar, Temple and Maurice. But it still remained to show that this position had support of no obscure sort in the general mental history of the church, and in the evolution of theology. Perhaps it would be going too far to say that Professor Pluntre gives in his adhesion to the idea of a universal salvation, but he does show with great learning that it had support from the days of Origen, through such great minds as Milton and Jeremy Taylor, down to the present day. The book is of course occupied most fully with the aspects of the modern controversy, and the chapters on the Salvation of the Heathen, the Wider Hope in English Theology, and German Eschatology, are in the broadest spirit of hopeful charity. The German school is most emphasized on the side which elaborates the Pauline view, which comes especially to the surface in the Epistle to the Romans. Then there is no small section devoted to exegetical study and the development of an eschatology in the Maccabean period and in the early church—the two famous regions for providing artillery to bombard strict dogmatism. The book ends substantially with practical applications, as the old sermonizers say. It shows how in the Roman communion the doctrine of indulgences has modified that of purgatory under Jesuit influence in favor of the charitable hope; extends the idea of probation into the ghostly world, and speculates on the activities of the intermediate state.

But beyond all this mapping of the field which appears in the book, in spite of the essay-like character of its composition, there is a vast fund of learning. One reads with a delight hardly surpassed by that which Professor Pluntre's tender sympathy with men excites, the fine criticism of passages in Plato, and Irenæus and Justin, and one passes with rare pleasure over the wide range of biographical study, growing more familiar with the spirit of such men as Dörner, Paley, Butler, Heber, Pusey, Manning and others whose names are a fragrant heritage in the church. Neither is the volume lacking in personal interest concerning the writer. His correspondence with a Catholic priest reveals the genial, patient scholar and Christian. As regards Canon Farrar's book, Professor Pluntre's essays are substantially a reinforcement of it, and a kind of supplement to it. They are not so hortatory, exegetical or popular, but they are stronger in the range of inquiry and in the wealth of critical and historical scholarship brought to bear on the subject. That the book is received so quietly, is a mark of the progress of popular thought towards the Eternal Hope.

D. O. K.

MEMOIRS OF KAROLINE BAUER. From the German. Boston: Roberts Brothers.

This book made a considerable literary, social and political sensation when it was produced in England about a year ago. The same interest can scarcely be expected to attach to it in this country, but it is not the less a valuable addition to biographical literature and Messrs. Robert Brothers have been wise in adding it to their list. Karoline Bauer has hardly been as much of a name to American readers until now, but the fact is but another illustration of race and language limitations and contradictions,—for while by a turn of circumstance or chance certain foreigners may become very well known to us, others quite as famous or notorious in their own environment escape general knowledge. Karoline Bauer was a distinguished comic actress at the Prussian capital in the days of Frederick William III. She is not backward in speaking of her own merits, but we have contemporary opinion that she was a comedian of good powers. Like Fanny Kemble she grew in the end to loathe the stage, associations, but that, it may be supposed, was when her powers to please had waned; at all events in her prime, 1820-35, when flattered and petted by king and public, she was full of enthusiasm for dramatic art. The period was one of the most brilliant in the history of the German stage and Bauer was in the centre of it all. She was on intimate terms with Weber, Mendelssohn, the Devrients, Henrietta Sontag, and a host of other celebrities, and the picture she draws of the king's infatuation with the theatre, while but corroborative of divers other accounts, has its own value, while many of the details here given with such fulness are to be found nowhere else.

It was not this aspect of the book however, that caused it to raise such a pother in England, and probably led to its re-issue in this country. Bauer had the good or bad fortune to become intimately associated with various highmights, thereby becoming measurably a political character. She was morganatically married, in 1829, to Prince Leopold of Saxe-Coburg, once husband of the Princess Charlotte of England, and thus uncle by marriage of Queen Victoria, and afterwards King of the Belgians. She tells the story of this affair in the plainest language, and the tale hurt the susceptibilities of the German element which by such a strangely ironical disposition of affairs, now rules Anglo-Saxon England. Not only is Prince Leopold's character drawn in none too favorable colors, but Baron Stockmar is shown to have been the go-between in the left-handed marriage, Stockmar being Queen Victoria's early guide, philosopher and friend. Here is a pretty chapter for British "loyalists," and they made no show of concealing their displeasure. It has to be said on that side that Karoline's virtuous protestations are of a rather flimsy sort. She claims to have been shamefully deceived by Prince Leopold, but it is certain she knew very well what she was doing in going to London to make the so-called marriage,—that she was in reality making herself nothing more than the Prince's mistress. Yet at a not distant time from the Prince Leopold affair she is hysterically indignant over the offers and persecutions of Prince August, son of the youngest brother of Frederick William, going even at one stage of their acquaintance to the length of leaping out of a window to escape his solicitations, though it does not appear that his suit was a whit less honorable than that of Prince Leopold. There is considerable matter of this kind in the "Memoirs," which we must distinctly say cannot be commended as a moral book.

It is, however, decidedly an addition to art biography, and as such we believe it will find a permanent place in the library. The reasons which gave it its angry vogue in England do not apply here, but art is a universal interest. Karoline Bauer was vain and she was sentimentally offensive, but she had the art temperament, and she had exceptional opportunities for development and observation. There is a pointed anecdote on every page of this short volume, and good anecdote is a pretty sure pass to popularity.

CATTLE RAISING ON THE PLAINS OF NORTH AMERICA. By Walter Baron Von Richthofen. Pp. 102. New York: D. Appleton & Co.

This is a concise description of some of the features of Western cattle-raising. The author, who, as he says he has "lived in Colorado for many years," might have learned ere this that there are no "barons" in the United States,—however it may be in other countries,—shows an intimate acquaintance with his subject and has made a practical and useful book.

Mr. Von Richthofen is much impressed with the growth of the West, and records it as "the only miracle of the nineteenth century." The opportunity for making money rapidly is still good, he thinks, but in twenty-five years it will be past, "and industries, like the cattle business and land ownerships, may become monopolies, as railroad and telegraph companies are now. Land which can now be had at from two to ten dollars per acre will then be worth twenty-five to one hundred dollars per acre. All lands situated in the valleys, and on higher places where irrigation can be had, will be occupied, producing large crops, and all the grazing lands will have owners." The consumption of beef, he thinks, is increasing more rapidly than the raising of cattle. "This fact is encouraging for cattle-breeders and land-owners. For many years to come they need not have any fear of over-production. The census of the United States shows a population of 50,000,000, with a yearly increase of 2½ per cent. Cattle-raising does not keep pace with this rapid increase of population."

The great improvement of stock is referred to at some length. It has been effected by the systematic purchase of blooded bulls,—Durhams, Herefords, and others. The latter are suggested as preferable, being much better feeders, and hardier, and consequently better able to stand the winters. The increase in value, compared with the original Texas stock, which has been effected by this improvement in breed is estimated at 50 per cent. "A four-year-old Texas steer will weigh 1000 pounds, worth three cents per pound, while a son of a Texas cow by a Shorthorn or Hereford bull, three years old will weigh 1,300 pounds, worth from four to five cents per pound."

By the increase of herds, by the advance in value of lands, and by the rise in the price of beef, fortunes have been made, and there is still room to make others, the author thinks. Some names of those who have become rich from small beginnings are given. A banker of Denver, "who does not wish his name thus advertised," bought 320 head of cattle in 1878, and made other purchases in subsequent years, until in 1882 his investment was \$76,000. His sales in 1880, '81, and '82 amounted to \$46,000, and in 1883 he sold

out entirely for \$150,000, having a clear profit in five years of \$120,000. "Ten years ago," we are further told, "an Irish servant-girl wanted money due her, amounting to \$150, from a cattle-raiser who lived in Montana. Cattle had been dull, and he could not dispose of any of his herd, but agreed with her to brand fifteen cows in her name, give her the increase, and carry them with his herd, free of cost, until she was ready to sell, he to have the first privilege of purchase. She accepted, held on to her purchase, and last May sold out to her employer for \$25,000."

ART NOTES.

THE Pennsylvania Museum and School of Industrial Art opens the season of 1884-85 with increased facilities and peculiar advantages. The most noticeable new feature is the opening of a separate building which has been erected during the summer for the accommodation of the classes in weaving, in which the use of both hand and power looms is thoroughly taught, and the designs made by students for carpets, rugs, damasks, worsted dress goods, and all classes of woven goods from the simplest to the most ornamental are worked into actual fabrics. The new building is two stories high, the lower floor being occupied by power looms, driven by an Otto gas engine of seven horse capacity, and the upper floor by hand looms.

The general course of study embraces Drawing and Painting in water colors from models, casts, draperies and still life: Lettering; Plane and Descriptive Geometry; Projections, with their application to machine drawing and to cabinet work and carpentry; Shadows, Perspective, Modeling and Casting; Practice in the use of Color, with special reference to the needs of designers—especially in textiles; Historical Ornament and Original Design. The Instrumental Drawing is taught by means of class lessons or lectures, and lectures are also given on Anatomy and Historical Ornament, upon which examinations for certificates are based.

In addition to the regular instruction in the subjects enumerated above, facilities are provided for practical work, under competent masters in the following branches:

1. Designing for all classes and grades of Woven Fabrics, Woolens, Worsteds, Damasks, Carpets, etc., including actual work at the loom.

2. Wood Carving in all its branches, Bosses, Reliefs, Intaglios, Mould Sinking, and all forms of practical application with which the most accomplished carver is expected to be familiar.

Each class is provided with the latest and most complete appliances in the way of tools and machinery, and the work is in every respect practical and adapted to the actual needs, from a business point of view, of the industries represented.

The faculty consists of Principal, L. W. Miller; Vice-Principal, A. Mason; Professor of Anatomy, Horace F. Jayne, M. D.; and a full corps of instructors in all the branches of study above indicated. The school year begins Monday, September 14th, and ends June 1st.

The Committee on Instruction of the Pennsylvania Academy of the Fine Arts has issued the accustomed circular for the season of 1885-86. There are no changes noted in the *personnel* of the school management, Thomas Eakins being Director; W. W. Keen, M.D., Professor of Artistic Anatomy; Thomas Anschutz, Professor of Painting and Drawing; Wm. L. Maclean, Demonstrator of Anatomy; H. C. Whipple, Curator, to whom all correspondence should be addressed.

The school year begins on the first Monday in October, and ends on the last Saturday in May. The study of Art Anatomy begins about the first of November and ends about the first of March. Doctor Keen's lectures on anatomy begin on the 13th of October and continue four months. Lessons on Perspective and Composition will follow those on Art Anatomy. Modeling from living quadrupeds will begin the first week in January.

From our London exchanges, also, we learn that a new drawing by J. M. W. Turner has been discovered in Bristol. In 1857 the late proprietor of the Bristol *Mirror* purchased for a few shillings at a public sale a large water-color drawing in an old-fashioned massive gilt frame. It was brought to the office of the paper and, having been hung up in the editorial sanctum, it subsequently passed into other hands. About five years since the nail on which the picture was hung gave way, and it fell to the ground, the glass in the frame being smashed to atoms, and the drawing itself receiving some injury. The party who replaced the glass, on returning the drawing to its owner, expressed a very strong opinion that the work of art, which had hitherto attracted but little notice, was a production of the celebrated painter, J. M. W. Turner. The drawing was more recently brought under the notice of an art dealer, who, although totally ignorant that any opinion had been previously given in the matter, immediately pronounced a similar confident judgment. Means were then taken to bring the draw-

ing under the notice of Mr. Ruskin, who gave it as his opinion that the work, which represents Edinburgh Castle and the North Bridge, is certainly by J. M. W. Turner, and has been a most interesting drawing. The size of the drawing is 3 feet by 2 feet.

The artists are already beginning to find their way back to town, the early dates of some of the most important exhibitions rendering a curtailment of the vacation season desirable that more time may be taken for finishing in the studio the sketches and designs made during the summer. The sculptors as usual are the first to return, these artists imperatively requiring studio facilities. Mr. Alexander M. Calder has returned this week and resumed work on the equestrian statue of General Meade. The horse which Mr. Calder finished before leaving town for the summer, has been cast in plaster, and the sculptor is now prepared to model the figure of the General. If his labors are prospered, the winter months will probably see the sculpture completed and ready for casting, and by next autumn, a year from this time, the Meade Memorial may be duly unveiled in Fairmount.

The Perry Memorial at New York, was completed this week and dedicated with appropriate ceremonies. The memorial is a statue of Commodore Perry, in bronze on a pedestal of granite. The figure is of heroic proportions and the pedestal is a cube of fifteen feet, making a total height of about twenty-five feet. The hero of Lake Erie is represented in the act of taking command of the *Niagara* as he boarded that vessel from his yawl after leaving his disabled flag-ship, the *Lawrence*. The pose is described as natural and dignified, and at the same time spirited and strikingly suggestion of animated action. In accordance with the usual graceful customs of the daily press, the name of the sculptor is not mentioned in any of the accounts of the inaugural ceremonies or criticisms of the work. The statue will remain veiled until September 10th, when there will probably be further ceremonies attending its final presentation to the public.

A current paragraph runs to the effect that Mr. Henry Irving, though a recognized artist and admittedly able to draw well, has not heretofore been known as a skilled draughtsman with a point. It has, however, been incidentally disclosed of late that he invents the stage pictures for which his management is famous, composes the scenes, arranges the groups and makes sketches in color of the stage effects, which the scene-painters follow. It is said that he shows fair facility in handling either pencil or brush, studying the model or copying from the flats with rapid execution, and turning out clever, spirited sketches which are much prized as souvenirs among his friends.

Mr. Humphrey Moore, who attracted some attention at the Centennial by a striking if not wholly pleasing exhibit, has hardly been heard of in this country since that occasion. It now appears that he has been studying in the East, and has made good use of the intervening years. He recently returned, not to this country but to London, where he has opened a special exhibition of his later works. These are said to be interesting and highly creditable studies of Oriental and Japanese subjects, and are highly spoken of by the London papers.

SCIENCE NOTES.

THE report of the special committee appointed by the President of the Franklin Institute to test the efficiency and duration of incandescent electric lamps, is a formidable looking document made up chiefly of tables. It is issued in connection with the *Journal of the Franklin Institute* for September. After the close of the Electrical Exhibition of last year, the Board of Managers of the Institute authorized such an investigation, and a very able committee was selected. J. B. Murdock, Lieut. U. S. N., was chairman, the other members being Wm. D. Marks, Whitney Professor of Dynamical Engineering in the University of Pennsylvania; Louis Duncan, Ensign U. S. N., who has for some time been working in the laboratory of Prof. Rowland, at the Johns Hopkins University; and Dr. G. M. Ward, photometric expert of the Philadelphia Gas Works. From such a committee thorough work was looked for, and the expectation was not disappointed, though in passing we may express our regret that the figures were not translated into words, so that a non-professional reader might obtain some idea of the results of the test. The tables which show results most clearly are these which tell the story of the endurance tests, and in these the Edison lamps have the best of it. Of 20 Edison lamps entered, all but one survived during the 1,065 hours of the trial. The Weston lamp comes next, 6 in 20 surviving. The only other lamp which survived the 1,065 hours test was a Stanley-Thompson, though another Stanley-Thompson lamp survived a 1,047 hours' test.

As a matter of course there was a disagreement during the investigation, though no fault attaches to the committee. Anticipating trouble before the tests were begun, a code was agreed upon and signed by Francis A. Upton on behalf of the Edison Company, and by Edward Weston for the United States Electric Lighting Company.

In March last, after the publication of the first result, Weston claimed that the lamps of his make were "a singularly bad lot of lamps" and desired to replace them by other lamps, but to this the Edison people would not agree.

It is more than likely that all of these elaborate tables will be of no great permanent value. Incandescent electric lighting is as yet in its infancy, and the present by no means represents the final lamp. The report on the dynamos, which are perfected to a much greater degree than are the lamps, will be awaited with much interest.

In a letter to *Science* Mr. F. H. Storer answers the question of the editor of that periodical as to how the "mad stone" superstition arose, as follows: Many a porous stone, in good capillary condition, can suck a wound, not so effectively, perhaps, as the lips of Queen Eleanor, but still with considerable power. This fact is especially true in case the stone has been moistened so that close contact between it and the body may be secured, as well as continuity of the fluids, and evaporation from the external surface of the stone, to actuate the capillary flow. Familiar applications of the principle are seen when the country-boy puts a dab of mud upon the spot where a hornet has stung him to compose the pain; and when the housewife uses French chalk, or soap-stone dust, or wet plaster-of-Paris, or, better yet, clay moistened with naphtha, ether, or oil of turpentine to draw out a grease-spot from clothing or from the floor. Thus much for the basis of the "superstition." It is assuredly easy to conceive withal that "mad stones" may have existed of such chemical composition, or charged with such chemical substances, that they could act as germicides as well as absorbents. Indeed, we have already in that most sovereign of balms, powdered chalk for a mosquito bite, something so nearly akin to the ideal mad stone, that your correspondent was more than justified in according to the matter his portion of that careful attention which Arago did extol.

M. Stanislas Meunier has described some silicious pebbles which are quite numerous in the quaternary gravels of the valley of the Loing, France, that are remarkable for being hollow and inclosing, together frequently with a loose stony nucleus, liquid water. They are about forty-five millimetres in diameter, and the water may be heard to strike against the walls of the cavity when the stones are shaken. The only way M. Meunier can account for the water getting into the pebbles is by its seeping through the pores, for not a sign of a crack can be seen with the eye or by the aid of a strong glass.

AUTHORS AND PUBLISHERS.

AN extremely interesting case has been introduced into the English courts to decide how much of a book may be reprinted by a newspaper without violating the copyright. When Messrs. Kegan, Paul and Co. sent out General Gordon's Khartoum diaries, they requested that the extracts used by the editors should not be so copious as to injure the sale of the book. Just what amount of quotation was likely to affect the sale of the volume apparently met with a diversity of opinion. The *Pall Mall Gazette* copied sufficient matter to fill two of its pages, and now the publishers bring suit for damages against the paper, arguing that the journal copied more passages than were required for the purpose of criticism. It was certainly true in the case of Gordon's diaries that the very gist of the work appeared in both English and American newspapers before readers had an opportunity to purchase and examine the volume for themselves. At last reports the case had been adjourned under circumstances indicating an unlikelihood of a definite settlement. The matter seems to have been meant only as a hint to publishers, but it is significant.

Prof. Edward A. Morse is reading the proof-sheets of a new volume which he has named "Japanese Homes and their Surroundings."—"Errors of Romanism, a series of lectures, by the Rev. Dr. William Graham, has been published by the Brandon Printing Company, Nashville.—The English Newspaper Press Fund has lost its President by the death of Lord Houghton, who took an active part in that useful body and may be said to have been its real founder.—A penny edition of "Nicholas Nickleby" has an enormous sale in England. For about two cents in American money there has been furnished in complete form and in readable type, one of the longest novels in the language. This beats by far anything in the way of American "broad-sides."

"The opinions of Baldwin" is the title of a volume of aesthetic and social essays which Vernon Lee is about to publish.—It is understood in Scotland that Mr. Henry Craik, author of a "Life of Swift" and editor of the "English Citizen" Series, will be appointed head of the Scotch Education Department, under the new Scotch Secretary.

Lee & Shepard's Fall announcement includes "English History for American Readers," adapted by Francis H. Underwood; "Young People's History of England," illustrated, by George Makepeace Towle; and "A Captive of Love," adapted from the Japanese by Edward Greey.

Mr. Max O'Rell's new book, "Les Chers Voisins!" was announced to appear in Paris on September 2. It is a humorous study, contrasting the French and English characters, bringing into relief, from the writer's point of view, the best sides of both, and is professedly written with a view to dissipate the prejudices that still exist in France on the subject of England, and in England on the subject of France.

The Egypt Exploration Fund (Messrs. Trübner & Co. have published a second edition of Edward Naville's work on the Store-city of Pithom and the Route of the Exodus.

The *Athenæum* of Aug. 22 contains a letter from Walt Whitman to Mr. Herbert Gilchrist. The letter states among other things that Mr. Whitman has just received 22 dollars and 6 cents from David McKay, which constitutes his earnings for the past six months. Mr. Gilchrist is secretary of a scheme on the part of Mr. Whitman's English admirers who are not "well satisfied with the apathetic or hostile reception which his works encounter in his own country" to tender him a free-will offering.

Funk & Wagnalls have in press "What the Temperance Century has made Certain," by Rev. Wilbur F. Crafts, which will give in a compact and inexpensive form the facts and lessons of the first century of the temperance conflict just closing, with a symposium of suggestions for the future from living leaders.

A new and cheap edition of Martineau's "Types of Ethical Theory" is in preparation for the American market by Oxford University. Cassell & Co. announce a series of "Readers," containing condensations of such novels as "The Vicar of Wakefield" instead of disconnected short extracts. "A Brief German Grammar," by Prof. W. D. Whitney, giving the most important facts in most compact shape, has been issued by Henry Holt & Co. Mr. W. D. Howells will publish through Ticknor & Co. this season a revised edition of his "Poems," and a volume of critical sketches on Italian poetry. Prof. Skeat says that \$25,000 would ensure the publication of an English Dialect Dictionary, towards which so much material has already been furnished by the Dialect Society.

The great "Dictionary of National Biography," which Mr. Leslie Stephen is now editing, the *Book Buyer* is glad to hear has proved, at least so far as it has gone, a financial as well as a literary success.

It is proposed to establish an English historical review, appearing quarterly, to be conducted somewhat after the model of the *Revue Historique* or Von Sybel's *Historische Zeitschrift*. It will deal with English, American and colonial history, and with such other branches of history, ancient and modern, constitutional and ecclesiastical, as are likely to interest any considerable class of English students.

The advance guard of holiday books makes its appearance in Messrs. E. P. Dutton & Co.'s illustrated edition of Longfellow's "Village Blacksmith." Mr. W. H. Bishop's "House of a Merchant Prince," and Mr. Edgar Fawcett's "An Ambitious Woman," have been added to the Riverside Paper Series.

A great-granddaughter of Sir Walter Scott, Hon. Mrs. Maxwell Scott, is editing a new edition of the Waverley Novels. A fac-simile reprint of the *editio princeps* of Shelley's "Alastor" has just come out. Major General Chesney of the British Royal Engineers, has written an historical romance of the war in the Cevennes. "A Tennyson Birthday Book," edited by Emily Shakespear, is announced by Macmillan & Co.

D. C. Heath & Co., Boston, a new firm, of which the senior member was formerly of the firm of Ginn, Heath & Co., continues the publication of some of the text-books bearing the latter's imprint. They have also in preparation, in the same line, "Studies in General History, 1000 B. C. to 1880 A. D." by Mary D. Sheldon; "A Select Biography of Ecclesiastical History" with notes by J. A. Fisher, and translations of J. P. Richter's "Levana" and Comenius's "Didactica Magna."

The London *Publisher's Weekly* says: American firms are now competing for a place in our educational progress, and we see Messrs. J. B. Lippincott Company in the field with the series of Dr. J. E. Worcester's "Dictionaries of the English Language," Wurtz's "Elements of Modern Chemistry," etc. Considering that the Lippincott "Worcester" has been in the market for many years, and that the house has long rated as one of the leading educational publishing concerns in the world, this notice is certainly none too "previous."

Heine's Songs are undergoing translation into Spanish at the hands of Señor Perez Bonalde, a Spanish gentleman residing in New York. The only Spanish versions of this German poet have been made through the French, and have no pretence to reproducing the marvelous verbal felicity of the German lyrist. Señor Bonalde seeks to put a Spanish word in the place of every word of Heine, giving his countrymen not only the music, but almost the very syllables of the original.

There are two uncommonly pleasant announcements in the current news. Most readers of the real good things know that excellent piece of fooling of Alphonse Daudet's—"Les Aventures de Tartarin de Tarascon;" it is now said that Daudet has finished a sequel to it called "Tartarin au delà des Alpes." The other item is of less value, but it will have interest for many. Mr. Frederick Sanders, pleasantly known by his "Salad for the Social," and "Salad for the Solitary," after a silence of years is about to publish, through Thomas Whittaker, New York, a new volume of essays.

The literature of geographical education is to be enriched by a promising series of class-books. Messrs. Macmillan & Co. propose to issue a series of books in which it will be "a constant aim to represent geography, not as a series of numerical tables or a string of disconnected facts, but as a luminous description of the earth and its inhabitants, and the causes that regulate the contrasts of scenery, climate, and life." They have placed the editorship of the series in the hands of Mr. Archibald Geikie, F. R. S., Director-General of the Geological Survey of the United Kingdom, and have secured the coöperation of numerous scientific and educational authorities.

Messrs. D. Lothrop & Co. Boston, will publish immediately a "Life of General Grant" by E. E. Brown, author of a "Life of Garfield."—A. T. B. DeWitt, New York, will publish in a few days "The Life and Public Services of U. S. Grant," by General James Grant Wilson.

"Ten Thousand Miles on a Bicycle" is the name of a work Karl Korn, the author of "Four Years at Yale, by a Graduate" has in preparation and expects to publish in the fall. The main purpose of the book is to present minute descriptions of about 6000 miles of American highways, which the author has explored while driving his wheel through 24 separate states and provinces; and also general descriptions of 5000 or 6000 additional miles which other tourists have reported upon.

Incredible as it may seem, the immaculate *Bradshaw* has been detected in an error. Mr. F. C. Burnand found it out, (and to his cost, for, trusting implicitly in the never mistaken Guide, he was carried in a journey beyond the point he wished to reach), and, entirely in the manner of Englishmen in such crises, he wrote to the *Times* about it. The *London Globe* thus refers to the incident:—"Mr. Burnand, it will be remembered, is the editor of a rival publication, and it is probably jealous because he cannot raise it to the same level of humour as that of its sparkling and vivacious contemporary. Now, if *Punch* would only go in for practical jokes, it might get on."

Dr. Loewe, companion and secretary of the late Sir Moses Montefiore, will soon have ready for publication his memoir of the late philanthropist.

General Thibaudin has completed a curious book entitled "The Next Franco-German war," a prophecy in the manner of "The Battle of Dorking."—Of somewhat related interest is a statement of General Grant's physician, Dr. Douglass, that the last book read by General Grant was that lugubrious prophecy "The Fall of the Great Republic," and that the General had been intensely interested in it.—Messrs. Houghton, Mifflin & Co. will publish in a few days, from new electrotypes plates, a new edition of "Uncle Tom's Cabin," which will be sold in cloth for \$1. Is it probably the cheapest copyright book of its size ever published in this country.

NOTES ON PERIODICALS.

MRS. Lamb, the editor, has in the *Magazine of American History* for September a good article descriptive of the locality where General Grant's remains have been buried, Riverside Park; and going with all needed fullness into the historical associations connected with it. Mrs. Lamb is an earnest student and her work is always well done. Another feature of the same issue is a continuation of the war papers,—General John C. Robinson, who commanded Fort McHenry at the time of the street attack on the Massachusetts regiment, writes of "Baltimore in 1861." General Thomas Jordan contributes a third paper giving some facts and a good many notions on the Confederate side; and General Meredith Read has a second paper describing the military preparations of New York in 1861, he being Adjutant-General of that State.

The *Overland*, Monthly San Francisco, is exhibiting a commendable degree of enterprise, and affords, we are glad to know, good promise that its revival will be an entirely satisfactory experiment. Mr. Charles H. Shinn, the manager, was for two years a post-graduate student at Johns Hopkins, and afterward for a year a journalist in New York, before assuming his present duties.

That prince of the pressmen, Theodore L. De Vinne, (he stands in the highest rank amongst typographers, too, for that matter), has a brief but very interesting paper in the September *Century's* "Topics of the Time," explaining some criticised features in the printing of that magazine. One of these is the use of two kinds of paper, one being for the engravings, the other for letter-press not illustrated. The explanation of the soft, smooth-finished paper in the former case is very simple—the surface being as level as possible, the engraved lines work out more evenly and perfectly than on a rough surface. The gloss, Mr. De Vinne says, is not useful, but would be dispensed with, if the calendering for smoothness did not produce it.

Mr. Theodore Child has a very interesting article—to which the editor gives the place of honor—in the August *Fortnightly Review*, on "The Paris Newspaper Press." He describes the leading journals, their plan, organization, methods, and personnel in detail, and after explaining the peculiar relations which many of them maintain with government and financial influences, he says "the Parisian press strikes one as a strange mixture of seriousness and frivolity, of loyalty and deceit, of sincerity and roguery, of irredeemable defects and brilliant qualities."

DRIFT.

—It is interesting to note that, of the thirty-nine young men who graduated in the class with General Grant at West Point, no less than ten were major-generals of volunteers in the Union army. They include, besides Grant, the famous corps commander, W. B. Franklin; J. A. Hardee, just retired from the regular service as a brigadier; Frederick Steele, one of Grant's best lieutenants; Rufus Ingalls, retired as Quartermaster-general, and others not so well-known. J. A. Reynolds, H. F. Clark and J. H. Potter are now on the retired list as colonels in the regular army. Fifteen of the class served in the Mexican war, and of these seven were killed in action or died of disease. Only four members went over to the southern side. Three of these were born in the north,—R. S. Ripley of Ohio, S. G. French of New Jersey and Franklin Gardiner of New York. They married into southern families. Gardiner was the only one in the army in 1861. Ripley rose to be lieutenant-general. Franklin led the class, and George Deshon was second. The latter resigned after the Mexican war, and is now a Catholic priest. Only ten of the class survive, of whom General Franklin, head of the Colt works at Hartford is most conspicuous.

—Ex-Minister Taft says he didn't find it too cold for comfort in St. Petersburg, and enjoyed his stay there very much. He found the emperor and court officials very polite and cordial. He didn't see anything of Nihilism, and thinks it has been "pretty much exterminated." The feeling when he left was that there wouldn't be any war with England at present. On the whole, the ex-minister thinks Russia is getting on in civilization, and is a country of great possibilities. "The Russians," he said to the *Tribune* reporter, "actually rival us in grain on the fertile plains of central and south-

ern Russia. If we had not so many railroads to collect and bring to market our grain, I think they would beat us. We have better transportation. They have also petroleum, as much as we, though they have not been able to refine it so well.

—The total annuity voted by Parliament to the sons and daughters of Queen Victoria is \$785,000, which, by the death of the Duke of Albany and the Princess Alice, has become \$339,000. It is the custom to grant an annuity to every prince and princess of the blood royal either upon majority, orphanage, or marriage. The children not only of the Prince of Wales, but of the Dukes of Edinburgh, Connaught, and Albany, will be entitled to annuities.

—The veteran landscape painter, Mr. A. B. Durand, now in his ninetieth year, may be seen almost any pleasant afternoon on the veranda of his charming cottage at South Orange, New Jersey. The house stands in the outskirts of the village, almost in the shadow of the Orange mountain, and contains a commodious and well-furnished studio. Mr. Durand is an excellent French scholar, and French literature has long been a diversion of his later years. He smokes his pipe, paints when he feels like it, receives his friends, and is altogether the most comfortable nonagenarian that American art has produced.

—Of the tourist season in Switzerland, this year, the *Pall Mall Gazette* says: Switzerland is full to overflowing, and never has there been such a season. Most of the hotels in the German speaking cantons are thronged—indeed, a large proportion of the visitors are German. Russians and Frenchmen there are, but Englishmen and Americans make up a formidable contingent. In the Grisons some 10,000 visitors have found, or are finding, accommodation (for the departures are more than compensated for by the arrivals), and at Zermatt, the great English and American resort, upward of 1,000 persons have obtained shelter at the Hotel Monte Rosa. As many others are scattered about the districts of Belalp, Brieg, Saas, Fey, Saasgrund, Aeggischhorn, St. Luc, Val d'Anniviers, Bella Tola, St. Nicholas, Evolènes, Val du Trient, Martigny, and the Bains de Lavey. Finally, it is anticipated that between the 30th of June and the 20th of September, when the mountain season in the Valais will come to a close, some 4,000 persons will have passed through the baths at Loèche alone. The hotels on the borders of the lake of Geneva are comparatively deserted, for the season at Lausanne, Vevey, Montreux, etc., came to an end in the middle of June, and will not be revived until the general stampede from the mountains sets in about the 15th of September.

—The Electric Power Company of New York, announce that they have established an electric railway running from Baltimore to Hampden, two and a half miles. The road is very crooked, and the gradients are as high as three hundred and fifty-two feet to the mile. The motor draws a loaded car, carrying sixty-five passengers, without difficulty, stopping and starting on the grade without slip of the wheels.

—A party of Arabs who lately arrived at New York on a foreign steamer, upon examination were found to be paupers, and were put back on the steamship to be returned in accordance with the terms of the law. According to the information in the possession of the Commissioners of Emigration at New York, a number of gypsies, believed to be the same excluded at that

city, have crossed the Canadian border line into Vermont, and are making their way south. Upon these facts being reported at the Treasury Department the chief of the Navigation Division gave the opinion that nothing could be done about the matter. According to his view the Pauper Immigration act, while it prohibits the landing of all pauper immigrants who may be brought here in a ship or vessel, is silent on the subject of such as may enter the country by land.

—*London Times*: Few persons are aware of the extensive nature of the victualing on board the great ocean steamers. Each vessel is provisioned as follows for passengers and crew; 3,500 pounds of butter, 3,000 hams, 1,600 pounds of biscuits, exclusive of those supplied for the crew; 8,000 pounds of grapes, almonds, figs and other dessert fruits; 1,500 pounds of jams and jellies; tinned meats, 6,000 pounds; dried beans, 3,000 pounds; rice 3,000 pounds; onions, 5,000 pounds; potatoes, forty tons; flour 300 barrels; eggs, 1,200 dozen. Fresh vegetables, dead meat and live bullocks, sheep, pigs, geese, turkeys, ducks, fowls, fish and casual game are generally supplied at each port, so that it is difficult to estimate them. Probably two dozen bullocks and sixty sheep would be a fair average for the whole voyage, and the rest may be inferred in proportion. During the summer months when travelling is heavy, twenty-five fowls are often used in soup for a single dinner.

—Prospective emigrants to the Congo basin may find food for reflection in the following by Mr. Stanley relative to the healthfulness of its climate. He says: However well the European may endure the climate by wise self-government, years of constant high temperature, assisted by monotony and poverty of the diet, cannot be otherwise than enervating and depressing, although life may not be endangered. To preserve perfect health, I advise the trader, missionary, coffee-planter, and agriculturist, who hopes to maintain his full vigor, after eighteen months' residence to seek three months' recreation in northern Europe.

—The Massachusetts Bureau of Statistics of Labor has just published its annual report, containing a variety of tabular information concerning labor and kindred subjects of the very highest interest and value. Chief among these is an inquiry into the comparative average wages of skilled labor for the several decades previous to 1860, conducted by Col. Carroll D. Wright, from original documents, over 100,000 quotations of prices having been used as the basis of the averages given therein. From these it appears that the average daily wages of artisans from 1830 to 1860 shows an almost uniform upward movement, ranging from 9.8 per cent. for metal-workers to 161.9 per cent. for glass-workers, woolen-mill operatives only showing a decrease of 7.7 per cent. The average increase in twenty leading industries, obtained by averaging the percentages is 51.3 per cent. In the same period the principal manufactured articles of consumption showed a decided decrease in price, boots and shoes declining 38.9 per cent., dry goods 30.9 per cent., and clothing 24.7 per cent. Edibles, however, in the same period increased from 8.7 per cent. for fish to 62.8 per cent. for agricultural products, the result obtained from averaging the percentages being, increase on eight articles, 39.5 per cent., decrease on six articles 30.6 per cent., an average increase of only 8.9 per cent. in articles of consumption, against 51.3 per cent. increase in wages. The figures which are given for 1830 and 1860 respectively represent not those particular years but an average of the decades preceding.

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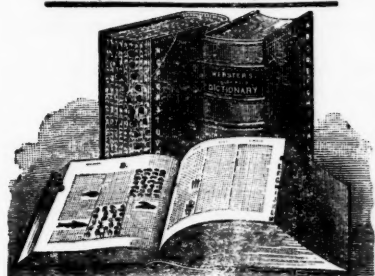
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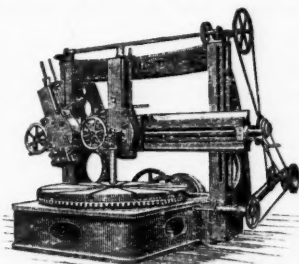
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